

**U.S. Department of
Homeland Security**

**United States
Coast Guard**



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APR 17 2015

U.S. Environmental Protection Agency
Region 5
Mr. Owen Thompson
Remedial Project Manager
Superfund Division
77 West Jackson Blvd.
Mail Code SR-6J
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US EPA RECORDS CENTER REGION 5



485604

Dear Mr. Thompson:

Per your email dated 16 April 15, attached for signature is the final Certification of Availability of Property for Conveyance under CERCLA 120 (h) for the United States Coast Guard Detroit Atwater property located at 2660 East Atwater Street Detroit, Wayne County, Michigan.

Please forward this document to Mr. Richard C. Karl, Director, Superfund Division, U.S. EPA Region 5 for his signature and return the original signed document to our office.

If you have any additional comments to this document, please call Mr. James Cook at 216-902-6255.

Sincerely,

A handwritten signature in cursive script, appearing to read "James A. Cook for".

Gregory O. Carpenter
Chief, Environmental Compliance
By direction of the Commanding Officer

Encl.

(1) Final Certification of Availability of Property for Conveyance under CERCLA 120(h) for United States Coast Guard Detroit Atwater Facility located in Detroit, Wayne County, Michigan, April 2015.

**DEPARTMENT OF HOMELAND SECURITY
UNITED STATES COAST GUARD
CIVIL ENGINEERING UNIT CLEVELAND**

**CERTIFICATION OF AVAILABILITY OF PROPERTY FOR
CONVEYANCE UNDER**

CERCLA 120(h)

FOR

**USCG DETROIT ATWATER FACILITY
DETROIT, WAYNE COUNTY, MICHIGAN**

April 2015

1. Site Description and Background

1.1 Custodial Agency

The USCG Atwater Facility property is currently under the administrative control and possession of the United States Coast Guard (hereinafter, the "Coast Guard" or "USCG").

1.2 Statement of Purpose

The USCG determined that the real property at the Detroit Atwater Facility (hereinafter, the Atwater Facility), as defined in Figures 1 and 2 is excess to the needs of the Coast Guard and has been reported as such to the U.S. General Services Administration (GSA). In order to transfer the property out of the federal inventory, pursuant to section 120(h), 42 U.S.C. § 9620(h), of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. §§ 9601 — 9675, the USCG must be able to, at a minimum, provide the warranty prescribed in 42 U.S.C. § 9620(h)(3)(A)(ii)(I). The warranty, in turn, provides that "all remedial action to protect human health and the environment with respect to "any hazardous substance found on the property at issue has been completed. Acting as the lead agency in this CERCLA remediation, the USCG has initiated the implementation of a non-time critical removal action and completed same. This document serves to memorialize the actions that the USCG has undertaken and the agency's certification that all necessary actions to convey this property out of the federal inventory may proceed.

1.3 Property Description

The USCG Atwater Facility is located at 2660 East Atwater Street in Detroit, Michigan along the Detroit River. The site parcel covers approximately 1.26 acres although only approximately 0.5 acre is land. The property is located at approximately 42 degrees, 20 minutes, 8.06 seconds north latitude and 83 degrees, 1 minute, 9.44 seconds west longitude. A general location map and a site plan are included as Figures 1 and 2, respectively.

1.4 Property Background

The Atwater Facility is a former USCG Marine Safety Office (MSO) that consisted of two separate buildings: a maintenance building and a six-car garage. Located in the northwestern corner of the property, the maintenance building, constructed in 1932, was a two-story wood and brick structure. The six-car garage, located in the northeastern corner of the property and constructed in the 1930s, was a single-story wood and brick structure. The former maintenance building and garage were both demolished around 2004. Along the south and western side of the property were boat slips, both of which remain. A boat house once enclosed the eastern slip.

The federal government intends to divest the property to the City of Detroit as part of the River Walk Redevelopment project. The property will be conveyed to the city through a trade of a city-owned parcel next to USCG Detroit Sector. The specific future use of the property by the City of Detroit is not known; however, the River Walk promenade will extend through the property.

1.5 Summary of Historical Site Investigations

Between 2001 and 2013, site assessments and cleanup activities were conducted at areas of concern on the property to identify and address soil and groundwater contamination. In 2001 and 2002, a Phase I and II Environmental Site Assessment (ESA) was performed on behalf of USCG. Soil samples were collected which identified arsenic, lead, and benzo(a)pyrene concentrations greater than Michigan Department of Environmental Quality (MDEQ) residential criteria. No groundwater samples were collected. In 2006, an ESA was conducted on behalf of the City of Detroit which also identified arsenic, lead, and polynuclear aromatic hydrocarbons (PAHs) at concentrations greater than MDEQ criteria. No groundwater samples were collected. From 2010 through 2011, a Site Investigation (SI) to meet the requirements of CERCLA was performed to characterize the extent of soil and groundwater contamination. A Human Health Risk Assessment was prepared based on the SI results, which were used as a basis of the development of an Engineering Evaluation/Cost Analysis (EE/CA). Soil contaminated with arsenic, lead, and PAHs was excavated and disposed of off-site during a removal action in 2013. After the removal action, quarterly groundwater monitoring was conducted. Based on the results of the groundwater sampling and future site use, no groundwater remediation was required. Below is a brief chronology of investigation and cleanup activities:

- December 2002: A Phase I and II ESA for Detroit Atwater was prepared by Tetra Tech. The results of the soil sampling in this investigation indicated that individual samples of benzo(a)pyrene, arsenic, lead, and selenium concentrations exceeded the MDEQ residential criteria. However, the average benzo(a)pyrene concentration was less than the MDEQ residential criteria, the concentration of arsenic was within the concentration range for soil in the United States (as published by the United State Environmental Protection Agency [USEPA]), and the concentrations of lead and selenium were only slightly greater than the United States soil concentration range. Additionally, the land use at the Site is zoned as commercial and industrial. Therefore, it was concluded that there were no areas of significant environmental concern requiring a remedial action prior to transfer of the property, and there were no further recommendations at that time.
- July 2006: A Phase II ESA was prepared by Enviro Matrix on behalf of the City of Detroit. The results of the soil sampling in this investigation indicated elevated PAHs and metals greater than MDEQ Groundwater Surface Water Interface and/or residential direct contact criteria.
- November 2012: A Site Investigation Report was finalized by Tetra Tech. Soil and groundwater samples were collected according to the Quality Assurance Project Plan and Field Sampling Plans, which were approved by USEPA. The results of the investigation indicated that soil remediation will be required to meet residential use criteria. Monitoring wells were installed and arsenic, lead, and PAHs were detected in groundwater samples at very low concentrations, and groundwater remediation was determined not to be required. USEPA concurred with the conclusions and recommendations of the SI Report in that no further action is necessary under the exposure scenario of the reuse plan and that no further action is necessary for non-residential uses, but additional action would be required for residential reuse.

- January 2013: An EE/CA was finalized by Tetra Tech. The EE/CA evaluated remedial actions to clean up the contaminated soil. The EE/CA included excavation and off-site disposal of contaminated soil and additional groundwater monitoring. The EE/CA was reviewed and approved by USEPA Region 5.
- January 2013: A Removal Action Work Plan (RAWP) was finalized by Tetra Tech. The RAWP detailed the planned cleanup activities and was approved by USEPA Region 5. The RAWP was prepared based on a removal action (excavation and off-site disposal) to allow for residential use of the property.
- February 11, 2013 through March 13, 2013: A Public Notice was published in the Detroit News and Free Press at the beginning of this period for public review and comment on the EE/CA and RAWP. Copies of the documents were also provided to MDEQ. No comments were received.
- April 8 through April 17, 2013: Tetra Tech performed the soil removal action and confirmation sampling. Approximately 1,480 cubic yards (2,440 tons) of arsenic, lead, and PAH contaminated non-hazardous soil was excavated and disposed at a permitted landfill. The areas that were excavated were restored with top soil and seed. Additional site debris (large rubber tires, scrap metal objects, large concrete pieces, old lumber, and an old parts washer) was also removed and disposed of off-site.
- June 2013: The Draft Removal Action Completion Report (RACR) documenting the soil removal action was prepared and submitted to the USEPA. The report concluded that the remedial action objectives (RAOs) were achieved for the current and anticipated future use of the property and is adequate for transfer. USEPA reiterated their comments about the SI Report, and also stated that groundwater restrictions would not be required if four consecutive rounds of quarterly groundwater monitoring results were less than Maximum Contaminant Levels (MCLs).
- June 2013: Two monitoring wells were installed to replace wells that were abandoned during the removal action. Groundwater samples were collected from the two new wells and the remaining existing well and analyzed for arsenic, lead, and PAHs. Three additional quarterly sampling events were performed in September 2013, December 2013, and March 2014. The results of each sampling event were summarized in individual groundwater monitoring reports which were included in the Final RACR.
- May 2014: The Final RACR was prepared documenting the soil removal action and quarterly groundwater sampling results. The report concluded that the RAOs were achieved for the current and anticipated future use of the property and that the property is adequate for transfer.
- July 2014: USEPA Region 5 issued a letter to the Coast Guard concurring with the RACR that that all applicable EPA and MDEQ residential soil and groundwater cleanup criteria for unrestricted use have been achieved.

2. Site Response Actions

2.1 Selection of Remediation or Removal Actions

In accordance with USEPA guidance on conducting non-time critical removal actions under CERCLA (USEPA, 1993), a limited number of potential alternatives to achieve the RAO and comply with Applicable or Relevant and Appropriate Requirements (ARARs), were identified and assessed.

Potential alternatives to achieve the RAO and comply with ARARs included no further action, restrictive covenants, risk assessment/exposure pathway evaluation, monitored natural attenuation, capping, soil stabilization, chemical extraction, phytoremediation, soil washing, in-situ chemical precipitation, and soil removal (Tetra Tech, 2013a). Each of these potential alternatives was evaluated with respect to the extent of impacts, the site-specific RAO, and current and anticipated future land use. The following is a summary of potential alternatives that were evaluated for the Site:

- a. No Action. Under this alternative, the impacted soil would remain in place with no effort to reduce concentrations or address potential exposure or migration pathways. The no action alternative would require a Five-Year Review into perpetuity, but is technically feasible, and the cost of implementing this alternative is relatively low. However, this alternative is not effective or administratively feasible and would not comply with ARARs. Because current soil conditions at the Site are not protective of human health and the environment, this option was not considered for further evaluation for this Site.
- b. Restrictive Covenants. This alternative would require the application of deed restrictions limiting or prohibiting the use or disturbance of soil at the Site and restricting access to areas of the Site with soil impacts above the RAO. This alternative may be technically feasible and could be effective in reducing the risk of exposure but does not by itself address potential migration pathways. The restrictive covenants would accompany the property deed into perpetuity. Continued verification of the land use and compliance with land-use restrictions would be required, including annual inspections and Five-Year Reviews, which makes this alternative relatively costly. This alternative was not retained for further evaluation for soil because the approach would not be acceptable to the City of Detroit and future Site uses.

For groundwater, however, existing restrictive covenants are already in place because groundwater wells are prohibited by City ordinance, and all drinking water within City limits is provided by the City potable water system.

- c. Risk Assessment/Exposure Pathway Evaluation. A human health risk assessment (HHRA) has been performed that included a conservative residential risk evaluation. The full HHRA can be found in the Site Investigation Report (Tetra Tech, 2012). Chemicals of concern (COCs) were identified based on the USEPA risk management benchmarks of an incremental lifetime cancer risk (ILCR) of 1×10^{-4} and a hazard index (HI) equal to 1, and based on the

MDEQ risk management benchmarks of an ILCR of 1×10^{-5} and a HI equal to 1. Thus, the risk assessment/exposure pathway evaluation has been performed, and, based on risk, additional action for soil is required, and additional action for groundwater is not required. Therefore, a risk assessment/exposure pathway evaluation was not retained for further evaluation at the Site.

- d. Monitored Natural Attenuation. This alternative involves allowing natural physical, chemical and biological processes to reduce contaminant concentrations to acceptable levels. A monitored natural attenuation (MNA) remedy would require extended performance monitoring to demonstrate that MNA is protective of potential receptors, to confirm the specific physical, chemical or biological mechanisms attenuating the contaminant, and to confirm the stability of the processes for maintaining the conditions necessary to achieve RAOs within an acceptable time frame. This alternative is not effective at addressing metals impacts in soil. Therefore, this alternative would not comply with ARARs or facilitate property divestment without implementing additional measures. MNA was not retained for further evaluation at the Site.
- e. Capping. This alternative involves constructing an exposure barrier or "cap" to eliminate the soil direct contact exposure pathway. This alternative is both effective and technically feasible for reducing the risk of human exposure to impacted soils but does not by itself effectively address potential migration pathways. The costs associated with construction of a soil cap are relatively low. However, long-term annual inspections and monitoring and continual Five-Year Reviews would be required into perpetuity to verify the integrity of the exposure barrier. Therefore, the total cost of this alternative is relatively high. Additionally, the site grade and future Site use would be affected by the cap. This alternative was not retained for further evaluation for this Site.
- f. Soil Stabilization. This alternative involves the addition of chemical stabilizers to the impacted soil to reduce the mobility of the contaminants. This alternative could be effective in reducing potential exposure to soil COC impacts and effectively addresses the potential migration of soil impacts. Additional costs associated with this option would include a treatability study, as well as post-treatment verification testing to confirm RAOs have been met. Long-term performance monitoring may also be required to determine if conditions change and constituents could be remobilized. Because this alternative does not effectively eliminate the long-term risk of human exposure by itself, affects future Site use and does not facilitate divestment of the property, it was not retained for further evaluation for this Site.
- g. Chemical Extraction. This alternative involves excavation of soil impacted by COCs above the RAO and onsite treatment of the excavated material. The soil is treated by adding a chemical extractant in which the COCs in the soil dissolve. The extractant is then disposed of accordingly and the treated soil can be reused for restoration of the Site. Restoration will consist of returning the land surface and vegetation similar to pre-excavation conditions. This alternative is effective and technically feasible for reducing the risk of human exposure and addresses potential migration pathways. While many of the costs associated with chemical extraction are similar to those of soil removal, the additional costs of a treatability study, the

chemical extractant and disposal of the waste stream along with additional labor make the cost of this alternative relatively high. Therefore this alternative was not retained for further evaluation for this Site.

- h. **Phytoremediation.** This alternative involves the planting of vegetation which take up COCs through bioaccumulation from the soil and store it in the tissues of the plants. This alternative is effective and technically feasible for reducing the risk of human exposure to impacted soils. The costs associated with the initial planting of the phytoremediation system are relatively low. However, harvesting and maintenance, including any necessary replantings and proper disposal of the plants after remediation would be required. The presence of plants may affect future Site uses. Further, multiple rounds of verification of soil remediation sampling would likely be required during remediation to demonstrate the effectiveness of the phytoremediation at meeting the RAO. Additional administrative and/or engineering controls may also be required during the remediation process. Therefore, the total cost of this alternative is relatively high. This alternative was not retained for further evaluation for this Site.
- i. **Soil Washing.** This alternative involves excavation of soil impacted by COCs above the RAO and onsite treatment of the excavated material. Soil washing is an aqueous based system in which smaller particles for which the COCs have a greater affinity are separated from larger soil particles. The contaminated material is disposed of off-site and the remaining larger soil particles can be reused for restoration of the Site. Restoration would consist of returning the land surface and vegetation similar to pre-excavation conditions and may require importing additional clean soil backfill. This alternative is effective and technically feasible for reducing the risk of human exposure and addresses potential migration pathways for metals. The PAHs would be more difficult to remove, however. While many of the costs associated with soil washing are similar to those of soil removal, the additional costs of a treatability study, mobilization and setup of soil washing equipment, and potential secondary treatment and/or disposal of the waste stream make the cost of this alternative relatively high. Therefore, this alternative was not retained for further evaluation for this Site.
- j. **Soil Removal.** Soil removal includes excavation and off-site disposal of soil impacted by COCs above the RAO and restoration of the land surface and vegetation similar to pre-excavation conditions. Soil excavation can also be extended to a limited depth below the water table to remove contaminated soil in the smear zone that can directly affect the groundwater quality. The removal of impacted soil effectively eliminates the direct contact exposure pathway. In addition, soil removal is both technically and administratively feasible. Soil removal eliminates the need for long-term inspection and/or Five-Year Reviews. The cost of the soil removal and off-site disposal is relatively low compared to the other alternatives. This alternative is cost effective, provides effective protection for human health and the environment, complies with ARARs, and would facilitate property divestment.

The soil impact remedies discussed above were initially considered based on cost, implementability, and protection of human health and the environment. The alternatives to address the soil impacts, no further action, restrictive covenants, monitored natural attenuation, capping, soil stabilization,

chemical extraction, phytoremediation, and soil washing, were initially considered but eliminated from further evaluation because they are not effective at protecting human health and the environment, are not implementable, and/or are not cost effective. Soil removal represented the most effective, implementable, and cost-effective action for the Site and was recommended as the protective and cost-effective alternative consistent with the requirements of the National Contingency Plan. Due to the shallow depth and limited extent of impacted soil greater than the RAOs and the anticipated future use of the site as part of the Detroit Riverwalk, the soil removal remedy represented the most financially and technically practical removal action that also ensured protection of human health and the environment. The soil removal alternative became the remedy implemented by the Coast Guard. For groundwater, restrictive covenants and risk assessment/exposure pathway evaluation were considered and determined to be protective of human health and the environment for potential drinking water exposure.

2.2 Removal Action and Site Restoration

As a result of past activities, arsenic-, lead-, and PAH-impacted soil was encountered in the surface and subsurface soil at the Atwater Facility. A removal action was conducted in accordance with the *USEPA's Guidance for Conducting Non-Time-Critical Removal Actions Under CERCLA* (USEPA, 1993). Although little, if any, exposure to the soil is likely during its future use as part of the Riverwalk, MDEQ residential exposure criteria were conservatively selected as cleanup criteria to be consistent with the cleanup requirements of the parcel to be traded from the City of Detroit to the USCG. The removal action activities were summarized and documented in the RACR (Tetra Tech, 2014c)

Excavation and removal of the arsenic-, lead-, and PAH-impacted soil was conducted at three general locations from April 8 through 17, 2013 (Figure 3). The total area excavated was approximately 9,200 square feet (with a depth range of approximately 2.5 to 7 feet) with 1,480 cubic yards (2,440 tons) of non-hazardous arsenic-, lead-, and PAH-impacted soil removed. The contaminated soil was transported by truck to the Veolia Arbor Hills Landfill in Northville, Michigan for disposal.

Confirmation soil samples were collected from the excavations for field screening using an Innov-X Delta Premium x-ray fluorescence (XRF) detector as described in the Field Sampling Plan. If the XRF instrument readings indicated arsenic concentrations less than 7.6 mg/kg and lead concentrations were less than 300 mg/kg, then soil removal activities ceased in that area. However, relatively high XRF detection limits for arsenic limited the use of the XRF arsenic data. Confirmation samples were also collected for off-site laboratory analysis for arsenic, lead, and PAHs. Confirmation samples were collected for laboratory analysis from the sidewalls and excavation bottom as described in the RAWP. If the XRF instrument readings for lead or the laboratory results for arsenic or PAHs exceeded the RAO limits, the excavation continued in the appropriate direction. Thirty-seven sidewall samples and 9 floor samples were analyzed for arsenic, lead, and PAHs. Excavations were stopped at the property line, pier wall, or where arsenic, lead, and PAH concentrations were less than the RAOs. However, because of the large volume of soil that was being excavated from the site, the depth of some excavations was stopped even though the floor sample results were greater than the RAOs.

The total arsenic laboratory analytical results for the sidewall samples ranged from 2.3 mg/kg to 38 mg/kg, and the bottom samples ranged from 4.2 mg/kg to 18 mg/kg. The total lead laboratory analytical results for the sidewall samples ranged from 2.7 mg/kg to 1,800 mg/kg, and the bottom samples ranged from 13 mg/kg to 720 mg/kg. The laboratory analytical results for benzo(a)pyrene equivalents (BaPEqs) for the sidewall samples ranged from 0.014 mg/kg to 7.9 mg/kg, and the bottom samples ranged from 0.13 mg/kg to 7.9 mg/kg.

The laboratory analytical results for arsenic were greater than the RAO of 7.6 mg/kg for eight samples. Similarly, the laboratory analytical results for lead were greater than the RAO of 400 mg/kg for six samples (excluding samples that were removed by the additional excavation). The laboratory analytical results for BaPEqs were greater than the RAO of 2.0 mg/kg for 3 samples.

Because COC concentrations in some confirmation samples were greater than RAOs, exposure point concentrations (EPCs) were calculated based on data for post-remediation surface soil and subsurface soil samples. Surface soil was defined as the 0-2 feet below ground surface (bgs) soil interval and subsurface soil was defined as the soil interval greater than 2 feet bgs but above the saturated zone. The dataset evaluated is comprised of the data reported for pre-remediation soil samples and confirmation soil samples not excavated during the removal action. The samples from the property line were also excluded from the calculations because these are not representative of the soil at the site. For purposes of human health risk assessment, an EPC is defined as the concentration in an environmental medium to which a human receptor is exposed. With the exception of lead, the EPC is typically the calculated 95 percent upper confidence limit (UCL) or the arithmetic mean. Per USEPA guidance, the arithmetic mean (versus the 95% UCL) is typically used as the EPC when conducting a human health risk assessment for lead. The sample detection limit was used as an input for non-detected results in the EPC calculations.

EPCs for surface soil and subsurface soil were calculated for arsenic, lead, and BaPEqs. The results were compared to the RAOs, but none of the EPCs calculated for the COCs were greater than the RAOs.

Restoration of the excavated areas on the property consisted of backfilling the areas with sand and topsoil material to return the area to original grade. The topsoil and disturbed areas were then seeded. Three samples of the backfill material were collected and submitted for laboratory analysis for arsenic and lead. One sample of the topsoil material was collected and submitted for laboratory analysis for arsenic, lead, and PAHs. The samples exhibited arsenic, lead, and BaPEq concentrations that were less than their respective RAOs.

Surface debris located at the Site was removed and disposed off-site. The surface debris consisted primarily of large rubber tires, scrap metal objects, large concrete pieces, old lumber, and an old parts washer. Concrete debris was disposed of through Recycled Aggregates. Steel debris was disposed of through Winston Brothers of Detroit Michigan. Tires were disposed of at Waddles Tire in Brownstown, MI. Miscellaneous debris was disposed of at Advanced Disposal in Northville, MI.

The City of Detroit required a broad analysis of the fill. Four composite samples (two of the fill and two of the top soil) were collected by Tetra tech for the City and analyzed for volatile organic compounds, semivolatile organic compounds, Michigan-10 metals, and polychlorinated biphenyls. The results were compared to MDEQ Residential Direct Contact Criteria. The results were less than the MDEQ criteria.

2.3 Groundwater

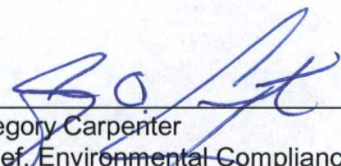
New monitoring wells were installed after the removal action to replace MW-01 and MW-02, which were abandoned prior to the removal action. Four rounds of quarterly groundwater samples were collected after the removal action in June 2013, September 2013, December 2013, and March 2014. Samples were analyzed for PAHs and Michigan-10 metals (total and dissolved). Results were compared to USEPA MCLs or MDEQ Residential Risk-based Screening Levels (RBSLs) if no MCLs were available. The results were less than these criteria. The groundwater monitoring reports are included in Appendix G of the RACR.

Because of the previous industrial property uses throughout the area, the shallow groundwater is an unlikely source of drinking water at the site. Further, groundwater wells are prohibited by City ordinance, and all drinking water within City limits is provided by the City potable water system. Therefore, no further remedial action is proposed groundwater.

3. Declaration of Compliance

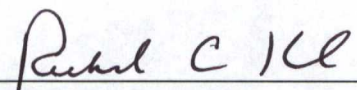
The proposal to transfer the Atwater Facility property has been adequately assessed and evaluated for: (a) the presence of hazardous substances and contamination on the property; (b) environmental impact anticipated from the intended use of the property; (c) the adequacy of use restrictions and notification to ensure that the intended use is consistent with protection of human health and the environment, and (d) adequacy of notice of disclosures, including those required by CERCLA § 120(h). The anticipated future use of the Atwater Facility property does not present a current or future risk to human health or the environment, subject to inclusion and compliance with the appropriate restrictions on use and disclosures as addressed above. As all remedial action necessary to protect human health and the environment with respect to hazardous substances found at the property has been taken by the USCG, Atwater Facility property is available for transfer under CERCLA § 120(h).

4/17/15
Date



Gregory Carpenter
Chief, Environmental Compliance
By direction of the Commanding Officer

4-24-15
Date



Richard C. Karl
Director, Superfund Division
U.S. Environmental Protection Agency Region 5

4. References

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